

July 22, 1985

DEPOSITORY

SEP 30 1985

MEMORANDUM TO THE HONORABLE MEMBERS OF THE EIGHTY-FOURTH GENERAL ASSEMBLY

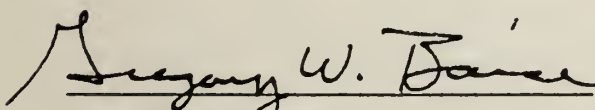
UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

SUBJECT: House Resolution 1180-Feasibility Study for
Incorporating the Calumet Skyway Toll Bridge as a
Part of the Illinois Toll Highway System, or
Operation of Said Facility as a Freeway

House Resolution 1180, adopted July 1, 1984, directed the Department of Transportation and the Illinois State Toll Highway Authority to prepare a study of the Calumet Skyway Bridge to evaluate its physical condition, traffic and revenue potential, outstanding debt, and to determine the feasibility as a part of the Illinois Toll Highway System or operating said facility as a freeway.

Included with this transmittal is a final report, "Feasibility Study-Calumet Skyway." This report is based on previous traffic and revenue statistics; engineering inspection reports; traffic information on alternate routes; origin-destination surveys and studies; maintenance, operational and administrative expense trends on the Skyway; on-site inspection of the physical structure; and, other investigations, including economic growth information and travel-time and distance studies. The finding of this report is that the options of operating the Skyway as a part of the Illinois Toll Highway System or of operating the facility as a freeway are not feasible.

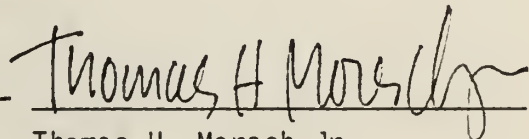
The Department and the Authority are available to answer any questions you may have with regard to this report.



Gregory W. Baise

Secretary

Illinois Department of
Transportation



Thomas H. Morsch, Jr.

Executive Director

Illinois State Toll Highway
Authority

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FEASIBILITY STUDY

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CALUMET STUDY

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prepared for

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
and
ILLINOIS DEPARTMENT OF TRANSPORTATION

by

Wilbur Smith and Associates

in association with



FIRST CHICAGO

The First National Bank of Chicago

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FEASIBILITY STUDY

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CALUMET SKYWAY

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Chapter 1

INTRODUCTION

The Calumet Skyway Toll Bridge links the western end of the Indiana Toll Road with the Dan Ryan Freeway approaching downtown Chicago from the south. This is depicted in Figure 1. It opened to traffic in 1959, only a few months after the original sections of the Illinois Tollway went into service in late 1958. However, the Skyway has not been financially self-supporting and the Illinois House of Representatives passed House Resolution 1180, which finds the Calumet Skyway Toll Bridge an important part of the Illinois State Highway System, and that it is in the best interest of the people of Illinois to develop and analyze the feasibility of alternatives relative to future financing, operation, and maintenance of the Skyway.

The resolution also directed the Secretary of the Illinois Department of Transportation, and the Illinois State Toll Highway Authority to prepare a study of the Calumet Skyway Toll Bridge, which would include:

"evaluation of its physical condition, traffic and revenue potential, terms of its outstanding debt for the purpose of determining the feasibility of incorporating the facility as part of the Illinois State Toll Highway System, the feasibility of operating said facility as a freeway, and of assessing the cost of rehabilitating said facility to assure its continued safe use as an important part of the highway system in the State



LOCATION MAP

of Illinois, and file a report within nine months, based on said study." (1)

The purpose of this study was to provide the answers to the questions put forth in the resolution.

Work Program

The beginning of the study involved a significant data collection effort. All available and pertinent information in the hands of city, state, and other agencies was assembled. This included:

- Traffic and revenue statistics for the past 12 years for the Calumet Skyway;
- Previous inspection reports prepared by the Skyway's consulting engineer, DeLeuw Cather (DLC);
- Traffic information on alternative routes from the Indiana Department of Highways and Illinois Department of Transportation;
- Origin-destination surveys performed by Wilbur Smith and Associates (WSA) at the West Point Toll Plaza on the Indiana Toll Road;
- Origin-destination studies performed by CATS at the Toll Plaza of the Chicago Skyway; and
- Maintenance, operational, and administrative expense trends on the Skyway.

With this information at hand, trends in traffic, revenue and all expenses were determined. In addition, on-site investigations included travel time and distance studies, inspecting the

(1) Illinois House of Representatives Resolution Number 1180, July 1, 1984.

physical structure of the Skyway and collection of economic growth information. Travel time and distance studies were made for the facility and competing routes. These studies were conducted over the course of two weekdays, to determine the relative attractiveness of the Skyway versus competing routes. On-site investigations were also made for the purpose of inspecting the Calumet Skyway, to verify information contained in the latest report on rehabilitative needs, and to update the cost estimate. A collection of socioeconomic data from appropriate sources in the project's influence area was made.

Chapter 2

TRAFFIC AND REVENUE TRENDS AND CHARACTERISTICS

Traffic and revenue trends and traffic characteristics were analyzed in order to develop reasonable traffic and revenue projections. Annual traffic and revenue trends for the 12-year period from 1973 to 1984 were compiled as was a monthly comparison of traffic and revenue between 1983 and 1984.

The determination of traffic characteristics was based on motorist surveys conducted by the Chicago Area Transportation Study (CATS) on the Skyway and a Wilbur Smith and Associates motorist survey at the West Point Toll Plaza on the Indiana Toll Road.

Annual Traffic and Revenue Trends, 1973 to 1984

Annual passenger car and commercial vehicle traffic and revenue trends for the Calumet Skyway were analyzed between the years 1973 and 1984. During this 12-year period, there were five passenger car toll increases and six commercial vehicle toll rate increases.

As shown in Table 1, passenger car and commercial vehicle traffic decreased in 1974 below 1973 levels as a result of the toll increase and Arab Oil Embargo of 1973-1974. While passenger car traffic grew in 1975 over the depressed 1974 level, commercial vehicle traffic declined significantly. Total traffic is shown to have decreased less than 1 percent which emphasizes the dominance of passenger car traffic on the Skyway.

Table 1
ANNUAL TRAFFIC TRENDS

<u>YEAR</u>	<u>PASSENGER CARS</u>	<u>PERCENT CHANGE OVER PREVIOUS YEAR</u>	<u>COMMERCIAL VEHICLES</u>	<u>PERCENT CHANGE OVER PREVIOUS YEAR</u>	<u>TOTAL</u>	<u>PERCENT CHANGE OVER PREVIOUS YEAR</u>
			(thousands)			
1973	7,631 ⁽¹⁾	--	1,381 ⁽¹⁾	--	9,012	--
1974	7,008	(8.2)	1,293	(6.4)	8,401	(6.8)
1975	7,210	2.9	1,134	(12.3)	8,344	(0.7)
1976	7,570	5.0	1,258	10.9	8,828	5.8
1977	8,133	7.4	1,300 ⁽²⁾	3.3	9,433	6.9
1978	8,125 ^{(3) (4)}	(0.1)	1,334 ^{(3) (4)}	2.6	9,459	0.3
1979	7,364	(9.4)	1,401	5.0	8,765	(7.3)
1980	7,051 ⁽⁵⁾	(4.3)	1,293 ⁽⁵⁾	(7.7)	8,344	(4.8)
1981	6,514 ⁽⁶⁾	(7.6)	1,099 ⁽⁶⁾	(15.0)	7,613	(8.8)
1982	6,235	(4.3)	939	(14.6)	7,274	(4.5)
1983	6,266	0.5	912	(2.9)	7,178	(1.3)
1984	7,212 ⁽⁷⁾	15.1	1,032 ⁽⁷⁾	13.2	8,244 ⁽⁷⁾	14.9

- (1) Passenger car toll increased to \$0.50 in August, 1973. Commercial vehicle toll increased to \$0.30 per axle in December, 1973.
- (2) Commercial vehicle toll increased to \$0.40 per axle in January, 1977.
- (3) Passenger car toll increased to \$0.60 in January, 1978. Commercial vehicle toll increased to \$0.50 per axle in January, 1978.
- (4) Passenger car toll increased to \$0.75 in December, 1978. Commercial vehicle toll increased to \$0.55 per axle in December, 1978.
- (5) Passenger car toll increased to \$0.90 in July, 1980. Commercial vehicle toll increased to \$0.65 per axle in October, 1980.
- (6) Passenger car toll increased to \$1.00 in August, 1981. Commercial vehicle toll increased to \$0.70 per axle in August, 1981.
- (7) Estimated by Wilbur Smith and Associates.
- SOURCE: City of Chicago Comptroller.

Passenger car traffic continued to grow and surpassed the 1973 volume in 1977. Although commercial vehicle traffic experienced an increase in per-axle toll rate in 1977, traffic continued to grow. Two toll rate schedule revisions took place in 1978 negatively impacting passenger car traffic slightly in 1978 and more significantly in 1979. The passenger car traffic decrease in 1979 was due to gasoline shortages and spiraling fuel prices in addition to the December, 1978, toll increase. Commercial vehicle traffic continued to grow during this period, despite toll increases.

Several factors contributed to the next several years of traffic decline on the Calumet Skyway. Toll rate increases were implemented in 1980 and 1981, negatively impacting traffic. In addition, the Indiana Toll Road, the western terminus of which feeds directly into the Calumet Skyway, experienced a toll rate increase in 1980. Potential motorists to the Skyway may have left the Toll Road in response to the higher toll rates. The most significant factor affecting Skyway traffic was the reduction in steel production which began during mid-1980. Over 20,000 employee positions directly related to steel production were permanently terminated. The effect of steel-related unemployment rippled through the economy of the study area causing unemployment in all sectors of the economy and therefore, less passenger car work trips and fewer commercial vehicle trips.

Traffic growth in 1984 was unprecedented in this 12-year study period. Passenger car traffic grew 15.1 percent and commercial vehicle traffic, by 13.2 percent. Much of this growth was related to construction and lane closures on the Borman Expressway, a competing facility with the Calumet Skyway and western end of the Indiana Toll Road.

Passenger car and commercial vehicle revenue between the years 1973 and 1984 is shown in Table 2. Passenger car revenue grew each year during the 12-year period. The highest revenue growth came in 1978 as a result of two toll rate increases. The lowest revenue percent growth occurred in 1983 with a 0.6 percent increase. Passenger car revenue in 1984 increased 15.1 percent over the previous year. This significant growth is largely attributable to construction on the competing Borman Expressway.

Commercial vehicle revenue growth generally paralleled traffic growth despite six toll rate increases. The largest decrease occurred in 1975 with a 14.8 percent drop over the previous year. The largest increase, 37.8 percent, was experienced in 1977. Three consecutive years of revenue declines between 1980 and 1982 inclusive, were the result of a decrease in steel production in the northwestern corner of Indiana and an overall severe economic downturn in the Skyway's traffic influence area. Commercial vehicle revenue grew in both 1983 and 1984, yet the 1984 revenue figure is approximately 2.0 percent below the revenue peak in 1979.

Monthly Traffic and Revenue Trends, 1983 and 1984

Monthly traffic and revenue for the years 1983 and 1984 are compared in Tables 3 and 4. Revenue growth for each month closely parallels traffic growth.

In general, significant traffic increases were realized in 1984 in comparison to 1983. These large growths are attributable to construction and lane reductions on the Borman Expressway. Construction on the Borman Expressway extended from February through October, 1984.

Table 2
ANNUAL TOLL REVENUE TRENDS

<u>YEAR</u>	<u>PASSENGER CARS</u>	<u>PERCENT CHANGE OVER PREVIOUS YEAR</u>	<u>COMMERCIAL VEHICLES</u> (thousands)	<u>PERCENT CHANGE OVER PREVIOUS YEAR</u>	<u>TOTAL</u>	<u>PERCENT CHANGE OVER PREVIOUS YEAR</u>
1973	\$3,068 ⁽¹⁾	--	\$1,326 ⁽¹⁾	--	\$4,394	--
1974	3,197	4.2	1,573	18.6	4,770	8.6
1975	3,597	12.5	1,340	(14.8)	4,937	3.5
1976	3,777	5.0	1,526	13.9	5,303	7.4
1977	4,059	7.5	2,103 ⁽²⁾	37.8	6,162	16.2
1978	4,854 ^{(3) (4)}	19.6	2,610 ^{(3) (4)}	24.1	7,464	21.1
1979	5,507	13.5	3,312	26.9	8,349	11.9
1980	5,741 ⁽⁵⁾	4.2	3,272 ⁽⁵⁾	(1.2)	9,013	8.0
1981	6,059 ⁽⁶⁾	5.5	3,167 ⁽⁶⁾	(3.2)	9,226	2.4
1982	6,207	2.4	2,858	(9.8)	9,065	(1.7)
1983	6,244	0.6	2,900	1.5	9,144	0.9
1984	7,185 ⁽⁷⁾	15.1	3,248 ⁽⁷⁾	12.0	10,433 ⁽⁷⁾	14.1

- (1) Passenger car toll increased to \$0.50 in August, 1973. Commercial vehicle toll increased to \$0.30 per axle in December, 1973.
- (2) Commercial vehicle toll increased to \$0.40 per axle in January, 1977.
- (3) Passenger car toll increased to \$0.60 in January, 1978. Commercial vehicle toll increased to \$0.50 per axle in January, 1978.
- (4) Passenger car toll increased to \$0.75 in December, 1978. Commercial vehicle toll increased to \$0.55 per axle in December, 1978.
- (5) Passenger car toll increased to \$0.90 in July, 1980. Commercial vehicle toll increased to \$0.65 per axle in October, 1980.
- (6) Passenger car toll increased to \$1.00 in August, 1981. Commercial vehicle toll increased to \$0.70 per axle in August, 1981.
- (7) Estimated by Wilbur Smith and Associates.

SOURCE: City of Chicago Comptroller.

Table 4
MONTHLY REVENUE TRENDS

1983-1984

MONTH	PASSENGER CARS			COMMERCIAL VEHICLES			TOTAL	
	1983	Percent Change	1984	1983	Percent Change	1984	1983	Percent Change
				(thousands)				
January	\$ 400	(1.0)	\$ 396	\$ 216	(5.6)	\$ 204	\$ 616	(2.6)
February	359	13.1	406	211	4.3	220	570	9.8
March	444	11.3	494	258	12.0	289	702	11.5
April	498	9.2	544	260	5.0	273	758	7.8
May	557	11.8	623	266	13.5	302	823	12.4
June	587	17.4	689	281	11.0	312	868	15.3
July	675	17.8	795	254	15.4	293	929	17.1
August	679	19.4	811	268	23.5	331	947	20.6
September	566	17.5	665	167	49.7	250	733	24.8
October	534	22.5	654	241	10.4	266	775	18.7
November	508	18.9	604	205	(2.0)	201	713	12.9
December	437	15.3	504 (1)	273	12.5	307 (1)	710	14.2
TOTAL	\$6,244	15.1	\$7,185 (1)	\$2,900	12.0	\$3,248 (1)	\$9,144	14.1
								\$10,433 (1)

(1) Estimated by Wilbur Smith and Associates.
SOURCE: Monthly Report on Operations, Calumet Skyway Toll Bridge.

The largest percentage increase in passenger car traffic occurred in October; peak commercial vehicle traffic was recorded in August. Revenue percentage growths for passenger cars reached a high in October and for commercial vehicles, in September.

It is interesting to note that traffic and revenue on the Skyway continued to grow even after construction on the Borman Expressway was complete. It is possible that motorists exposed to the Skyway, the most expedient alternative to the Borman, especially during morning and evening peak period, enjoyed time and mileage savings resulting in actual lower travel costs despite the toll charge.

Travel Pattern Summary

Both the WSA and CATS motorist interview surveys pertaining to traffic on the Skyway indicated similar travel characteristics. It was estimated, according to the WSA motorist survey, that of those trips passing through the West Point Toll Plaza on the Indiana Toll Road, 24 percent go to central Chicago, 22 percent are destined for the north side of Chicago, and 22 percent to the south side of Chicago. Small percentages ranging from 7.0 to 1.8 were headed to northern Cook County; O'Hare Airport and northwest Cook County; Lake County, Illinois; and Illinois counties along the Northwest Tollway.

Of these trips, 59 percent of the passenger car motorists were making the trip to or from work or were on business related trips. Another 21 percent of the passenger car drivers were making a social or recreational trip and personal business ranked third in order of importance, with 14.7 percent traveling for this reason.

Of the commercial vehicle drivers passing through the West Point Plaza, 51.7 percent were making the trip for business purposes. Over 25 percent of the commercial vehicle operators were traveling for social or recreational reasons and over 16 percent of the ADT were estimated to be traveling for personal business.

The majority of trips generated to the Chicago and Cook County area originated in the Hammond and Portage areas of Indiana. For commercial vehicles especially, the long distance component was a significant characteristic.

Chapter 3

ECONOMIC GROWTH AND ENERGY COST AND AVAILABILITY

Socioeconomic and demographic trends and projections create a picture of an area's current and future economic health and viability. The primary area of influence from which the Calumet Skyway draws trips is the northeastern corner of Indiana, central Chicago and the area in southeastern Cook County adjacent to the Skyway.

The steel production based economy of northwestern Indiana has experienced dramatic change in the last five years. Steel producing plants in the area are operating at a fraction of the capacity which they were initially built to handle. Beginning in mid-1980 and continuing through 1982, over 20,000 employees in this area became unemployed, as many positions were eliminated. Unemployment rose to 15.1 percent.

Today, the region's unemployment rate is 9.4 percent, still high compared to the national rate of 7.3 percent. Basic structural changes in the economy of northwestern Indiana render job opportunities in the area's traditional professions almost nonexistent. According to the Northwestern Indiana Regional Planning Commission (NIRPC), employment projections are not made because employment changes occur so quickly and dramatically that forecasts are useless.

Population in Lake County, Indiana, is projected to decrease 0.2 percent annually, between 1980 and 2005. Some residential development and associated commercial development is expected to occur in the southern part of the county. Several office buildings are available for occupancy in Merrillville.

Porter County population is expected to grow 1.7 percent annually between 1980 and 2005. Some single family residential housing and associated commercial development is expected near Valparaiso.

Discussions with representatives of NIRPC indicated that many communities in the study area are just beginning to pull together the machinery of economic development in order to sell themselves. There are no indications of major economic development in the area.

The area immediately adjacent to the ramps to and from the Skyway in Cook County is a stagnant, no-growth area. According to the City of Chicago, Department of Planning, there is a considerable amount of vacant land in this southeastern section of Chicago yet much of it is beset with environmental problems. Cook County population is expected to grow 0.1 percent annually while employment is expected to rise 0.4 percent annually.

Traffic growth on the Skyway, as a result of economic factors for the primary area of influence, is expected to be minimal. It is expected to occur due to one-time inducements from new Indiana Toll Road interchanges and economic development in southern Lake County, Indiana. In addition, nationwide economic growth would account for modest increases in through-traffic.

Among various issues which have concerned transportation planners over the past ten years has been energy as it relates to cost and availability for vehicular travel. Based upon

experience during the energy interruptions of 1973-1974 and 1979, it is clear that motor fuel availability, rather than price, will continue to be the primary factor capable of severely affecting travel demand in the corridor. This is not to suggest that dramatic retail gasoline price increases such as the 38 percent price jump between 1979 and 1980, cannot have short-term impacts. Analysis of consumption impacts indicates that short-term elasticity of demand ranges from (0.15) to (0.30). This means that for the brief period of time during which a crisis is perceived, an increase of 1.0 percent in the price of gasoline would likely be met with a decrease in demand of 0.15 to 0.30 percent.

However, it is believed that only availability constraints, if they were to occur again, would be the main cause of any disruption in traffic growth. Numerous reasons have emerged since 1979 which suggest this problem has been addressed and that practical solutions and contingency plans are being developed. The following is a listing of circumstances and events which have occurred in recent years and are expected to continue through the forecast period, lessening the probability of a significant availability disruption: ⁽²⁾

- Net petroleum imports during the first eight months of 1984 averaged about 4.7 million barrels per day representing 29.7 percent of total U.S. consumption. In 1977 and 1978, imports as a percent of consumption were 46.5 and 42.5 percent, respectively;
- The U.S. has shifted its dependence away from OPEC, particularly Arab OPEC sources. In 1984, OPEC accounted for about 44 percent of U.S. imports while Arab OPEC sources provided only 18 percent of all imports. In

(2) Energy related statistics derived from U.S. Department of Energy.

1977, OPEC supplied 72 percent of all imports of which Arab OPEC accounted for 37 percent;

- In 1984, replacement of oil previously imported from Persian Gulf sources was obtained primarily from Mexico, Canada, and Venezuela, in that order. In 1977, this list was Saudi Arabia, Nigeria, and Libya;
- The Strategic Petroleum Reserve now contains 434 million barrels of oil, an amount equal to 90 days of net imports;
- Energy consumption per dollar of gross national product dropped by 11 percent between 1980-1983;
- Residential and commercial buildings in the U.S. today consume 20 percent less energy per square foot than ten years ago;
- Energy consumption per capita has declined by 14 percent between 1973 and 1983; and
- Energy input per unit of industrial output has declined by 23 percent since 1973.

In summary, continued conservation and a worldwide oversupply of petroleum appear, in the absence of an unforeseen supply disruption, to ensure adequate supplies throughout the forecast period. Prices which have been softening for the past two years are expected to increase but at rates of increase which do not exceed the overall rate of inflation.

In light of adequate supplies of motor fuel in the coming years, future trips potential to the Skyway will not be negatively affected by energy constraints.

Chapter 4

TRAFFIC AND REVENUE ESTIMATES

Traffic and revenue estimates were prepared for the ten-year period extending from 1985 to 1995. Traffic and revenue trends, concession revenue trends, socioeconomic variable trends and forecasts, and future roadway improvements both on and off the Calumet Skyway were considered when generating future traffic and revenue.

Estimates were developed for the following scenarios:

- Toll schedule remains at current levels; and
- Toll schedule increased to maximum rate level.

Basic Assumptions

Estimates of traffic, toll revenue, concession income and other revenue are predicated on the following basic assumptions:

- Three interchanges on the western end of the Indiana Toll Road will open in 1985 and 1986, at Milepost 10, Kline Avenue; Milepost 15, Broadway; and Milepost 23, Willow Creek Road;
- Indiana Route 912 will open in 1987, and connect to Milepost 3 of the Indiana Toll Road;
- No further major roadway improvements will be made to the Borman Expressway;

- The economy of the primary influence area will remain depressed. The secondary influence area will experience limited economic growth. The national economy will remain generally stable, although an economic slowdown will be experienced in 1986; and
- The present levels of motor fuel availability and pricing adjusted for inflation, will prevail during the projection period and no national emergency will arise which would abnormally affect the use of motor vehicles.

Any departure from the above assumptions could materially affect the revenue estimates provided.

Forecast Methodology

Traffic and revenue trends for the Calumet Skyway were collected and analyzed in order to ascertain normal and irregular growth patterns. A monthly comparison of Skyway traffic and revenue was completed to recognize the most current patterns. Concession and other revenue trends were also evaluated in order to develop reasonable projections. Conversations with planners knowledgeable of the area's economic growth and development's effect on traffic were conducted. Recognition of current and future capacity constraints on the Borman Expressway were also considered in the analysis.

In order to ascertain the maximum toll rate that could be charged on the Skyway, travel pattern data obtained through motorist interviews previously conducted by WSA at the West Point Toll Plaza of the Indiana Toll Road were used. These were factored to average daily traffic levels for passenger cars and

commercial vehicles. Daily and hourly variations were recognized when estimating peak versus off-peak period trips. Route reconnaissance and travel time and distance studies were conducted on the Skyway and the alternate, competing routes during peak and off-peak hours. Per minute and per mile travel costs were determined for passenger cars and commercial vehicles, and were applied to the distance and times recorded during the reconnaissance surveys. The ratio of travel costs for the different routings were compared, and used to estimate the number of trips expected to be retained on the Skyway. Toll-free and three alternate toll rates were then added into travel costs and used to perform a toll sensitivity analysis. Manual traffic assignments were made to estimate toll sensitivity, and a maximum toll rate was determined.

Estimated Annual Revenue

Traffic and revenue growth on the Skyway will take place for several reasons. New interchanges will provide better access to the Indiana Toll Road from the communities in northwestern Indiana. In addition, new access to the Toll Road from southern Lake County will increase Skyway traffic. The national economy is expected to continue growing, in the long run, potentially adding more through passenger car and commercial vehicle trips to the Skyway.

Estimated annual toll, concession, and other revenues for the period 1985 through 1995 are presented in Table 5. The projections assume the Skyway will continue to operate as an independent facility and that the existing toll schedule will remain in effect. The present passenger car toll is \$1.00 and the commercial vehicle rate is \$0.75 per-axle. Concession and

other revenue was estimated by recognizing past revenue trends, current concessionaire contracts, and future traffic growth.

Table 5
ESTIMATED ANNUAL TOLL AND CONCESSION REVENUE

<u>YEAR</u>	ASSUMING EXISTING TOLL <u>SCHEDULE (1)</u>	ASSUMING MAXIMUM TOLL <u>SCHEDULE (1)</u>
1985	\$ 10,904,000	\$ 12,010,000
1986	11,263,000	13,548,000
1987	11,636,000	13,993,000
1988	12,001,000	14,410,000
1989	12,223,000	14,699,000
1990	12,466,000	14,993,000
1991	12,715,000	15,292,000
1992	12,845,000	15,446,000
1993	12,990,000	15,620,000
1994	13,102,000	15,758,000
1995	13,234,000	15,917,000

(1) Includes other revenue.

Revenue in 1985 is estimated to be \$10,904,000. This is expected to rise to \$12,001,000 in 1988 and to \$13,234,000 in 1995.

Projections of Skyway toll, concessions and other revenue were also made assuming the maximum toll schedule was implemented. The maximum toll rate calculated for passenger cars was \$2.00 and

\$1.50 per-axle for commercial vehicles. These are the toll rates at which a further increase would result in lower toll revenues due to traffic loss. Ten-year revenue projections for this alternative are also shown in Table 5. Estimated 1985 revenue is expected to total \$12,010,000. In 1988, revenue is expected to reach \$14,410,000 and in 1995, to rise to \$15,917,000.

Chapter 5

PHYSICAL INVENTORY AND ESTIMATED REHABILITATIVE COSTS

An important part of this feasibility analysis was an assessment of the physical condition of the Skyway. Also, estimates of both short-term (five years) and long-term rehabilitative needs were developed.

Physical Condition of Skyway

In order to develop an objective evaluation of physical condition and cost of rehabilitation of the Skyway, an on-site inspection was made prior to making an analysis of various inspection reports and other documents.. A "windshield" survey was made and a general perspective of the condition of the deck, floor system and substructure was obtained. Since the scope of work did not permit an "in-depth" inspection, the needs determined are based on visual inspection from above and below each of the structures and a surface inspection of the various pavement sections, guardrails, retaining walls, etc.

Overall, the abutments, bearings and structural steel appear to be in good condition. One exception to this is the moderate-to-heavy rusting on beams, diaphragms and bearings under open deck joints. The paint is also in poor condition at the open joints. The remainder of the paint appears to be at a normal level of deterioration and wear, based on the number of years since last painted, which varies from 3 to 23 years.

The concrete abutments and piers are in good condition although there are moderate-to-heavy salt and water stains due to roadway drainage through open deck joints. The steel bents in the various viaduct spans appear to be in good condition. Again, the exception is at open deck joints where moderate-to-heavy rust and paint failure was noted. More detailed observations made by the inspection team and condensed inspection observations from the 1984 DeLeuw Cather (DLC) inspection report are provided in the Appendix.

Estimated Skyway Rehabilitative Costs

Based on previous reports, and the general inspection described above, cost estimates of the work necessary to restore the Skyway to its original condition were developed. The estimates are based primarily on information obtained from Mr. Gary Marfise, Manager of the Skyway; the Illinois Department of Transportation; and the Illinois State Toll Highway Authority. Sufficient spot checks were made to assure that quantities and unit costs are reasonably current. The estimated costs were prepared assuming the rehabilitative work would be accomplished over approximately a five-year period, and are shown in Table 6.

Table 6
ESTIMATED REHABILITATIVE COSTS

<u>ITEM</u>	<u>COSTS</u>
Bridge deck-concrete overlays	\$16,000,000
Bridge painting	3,500,000
Drainage repairs	4,000,000
Concrete median repair/replacement	3,500,000
Substructure repairs	1,000,000
Resurfacing	2,000,000
Guardrail repair/replacement	1,000,000
Toll plaza rehabilitation	1,000,000
Replace bridge decks (Indiana Ave-Michigan Ave. ramps)	<u>11,000,000</u>
TOTAL	\$43,000,000

Chapter 6

ESTIMATED ANNUAL MAINTENANCE, OPERATIONAL AND ADMINISTRATIVE COSTS

In order to complete the cost picture, estimates of annual maintenance, operational and administrative costs were made for the Skyway. As a first step in developing these estimates, the trend in maintenance, operational and administrative costs since 1973 were reviewed. As shown in Table 7, total costs rose from \$1,201,000 in 1973 to a peak of \$5,769,000 in 1982. Costs for 1984 are estimated at \$3,407,000. It should be recognized that the maintenance portion of these costs largely reflect the availability of funds rather than needs. It is readily apparent, from the general inspection conducted, that maintenance expenditures have not been at a level sufficient to prevent significant deterioration of the facility.

Estimated Annual Maintenance Expenses - The rehabilitative costs, already discussed, are based on the assumption that the Skyway would be completely rehabilitated over the next five years. Therefore, the estimated annual maintenance costs reviewed here include only those costs associated with "routine maintenance," and do not provide for rehabilitation or reconstruction of the facility.

Annual maintenance costs for the Skyway have been estimated using cost trends of past years and the advice of the Skyway Manager. In addition, the estimate for winter maintenance reflects information received from the Illinois Department of Transportation and the Illinois State Toll Highway Authority.

Table 7
MAINTENANCE, OPERATIONAL AND ADMINISTRATIVE
EXPENSE TRENDS

<u>YEAR</u>	<u>MAINTENANCE</u> ⁽¹⁾	<u>OPERATIONAL</u>	<u>ADMINISTRATIVE</u>	<u>TOTAL</u>
		(thousands)		
1973	\$ 515	\$ 534	\$152	\$1,201
1974	966	555	165	1,686
1975	788	622	145	1,555
1976	1,201	682	142	2,025
1977	895	779	206	1,880
1978	1,925	855	202	2,982
1979	1,575	860	206	2,641
1980	2,232	981	237	3,450
1981	2,705	1,093	291	4,089
1982	4,267	1,211	291	5,769
1983	3,349	1,463	274	5,086
1984	1,646 ⁽²⁾	1,506 ⁽²⁾	255 ⁽²⁾	3,407 ⁽²⁾

(1) Includes rehabilitative costs.

(2) Estimated by Wilbur Smith and Associates.

SOURCE: City of Chicago Comptroller.

It should be noted that winter maintenance costs have not been included in the Skyway budget in the past because snowplowing and the application of chlorides/abrasives has been done by City of Chicago crews and not charged to the Skyway.

The following estimate of annual maintenance costs has been divided into three categories - Routine, Winter, and Toll Collection Equipment Maintenance. Routine maintenance includes the patching and sealing of the pavement and shoulder surfaces, crack sealing, expansion joint sealing, guardrail repair and

replacement, spot cleaning and painting of structural steel, roadside maintenance, and toll plaza maintenance. Winter maintenance includes snowplowing, chloride and/or abrasive application and clearing snow and ice from safety walks and railing areas.

Maintenance of the toll collection equipment is a separate category because the equipment is in the process of being replaced. Scheduled for completion this year, the new equipment is expected to significantly reduce the cost of maintenance.

Maintenance costs for 1985 are estimated to include:

● Routine Maintenance	\$1,500,000
● Winter Maintenance	100,000
● Toll Collection Equipment Maintenance	<u>100,000</u>
TOTAL	\$1,700,000

For purposes of this estimate an annual inflation factor of 9.0 percent per year was applied over the ten-year projection period. This factor is the same as that currently being used for estimates of future maintenance on the Illinois Tollway.

Estimated Operational and Administrative Expenses - No significant changes in operational and administrative expenses are anticipated, aside from an assumed 9.0 percent per year inflation factor. The 1985 estimate of operational expenses is \$1,560,000 and for administrative cost, \$274,000.

Chapter 7

ESTIMATED ANNUAL NET REVENUE

Estimated annual maintenance, operational, administrative and rehabilitative expenses plus general reserve fund deposits are projected to amount to \$12,434,000 in 1985. As shown in Table 8, this is expected to rise to \$13,889,000 in 1989, decreasing to \$7,938,000 in the following year and then gradually increasing to \$10,867,000 in 1995.

Assuming the Skyway remains an independent facility and operates under the existing toll rate schedule, net revenue available for debt service would show an estimated shortfall of \$1,530,000 in 1985. As shown in Table 9, by 1990, when it is assumed that all major rehabilitative work in the Skyway would be complete, net revenue available for debt service would amount to \$4,528,000. Thereafter, net revenue is forecast to gradually decrease to \$2,367,000 in 1995.

If the Skyway is assumed to be an independent facility and if the maximum toll schedule for the Skyway is implemented, net revenue available for debt service in 1985 would show a shortfall estimated at \$424,000. In 1990, when Skyway rehabilitation is assumed to be complete, net revenue would rise to an estimated \$7,055,000. Between 1990 and 1995, net revenue is forecast to decline annually to \$5,050,000 in the final year of the projection period.

Table 8
TOTAL ESTIMATED EXPENSES

<u>YEAR</u>	<u>MAINTENANCE, OPERATIONAL ADMINISTRATIVE, AND REHABILITATIVE EXPENSES</u>	<u>GENERAL RESERVE FUND DEPOSITS</u>	<u>TOTAL</u>
1985	\$12,134,000	\$ 300,000	\$12,434,000
1986	12,452,000	300,000	12,752,000
1987	12,799,000	300,000	13,099,000
1988	13,177,000	300,000	13,477,000
1989	13,589,000	300,000	13,889,000
1990	5,438,000	2,500,000	7,938,000
1991	5,927,000	2,500,000	8,427,000
1992	6,461,000	2,500,000	8,961,000
1993	7,041,000	2,500,000	9,541,000
1994	7,675,000	2,500,000	10,175,000
1995	8,367,000	2,500,000	10,867,000

Table 9
ESTIMATED ANNUAL NET REVENUE

YEAR	EXISTING TOLL SCHEDULE			MAXIMUM TOLL SCHEDULE		
	Total Revenue	Total Expenses	Net Revenue(1)	Total Revenue	Total Expenses	Net Revenue (1)
1985	\$10,904,000	\$12,434,000	\$ (1,530,000)	\$12,010,000	\$12,434,000	\$ (424,000)
1986	11,263,000	12,752,000	(1,489,000)	13,548,000	12,752,000	796,000
1987	11,636,000	13,099,000	(1,436,000)	13,993,000	13,099,000	894,000
1988	12,001,000	13,477,000	(1,476,000)	14,410,000	13,477,000	933,000
1989	12,233,000	13,889,000	(1,666,000)	14,699,000	13,889,000	810,000
1990	12,466,000	7,938,000	4,528,000	14,993,000	7,938,000	7,055,000
1991	12,715,000	8,427,000	4,288,000	15,292,000	8,427,000	6,865,000
1992	12,845,000	8,961,000	3,884,000	15,446,000	8,961,000	6,485,000
1993	12,990,000	9,541,000	3,449,000	15,620,000	9,541,000	6,079,000
1994	13,102,000	10,175,000	2,927,000	15,758,000	10,175,000	5,583,000
1995	13,234,000	10,867,000	2,367,000	15,917,000	10,867,000	5,050,000

(1) Net revenue equals gross revenue minus maintenance, operational administrative costs, minus major rehabilitation costs, minus general reserve fund deposits.

Chapter 8

FINANCIAL AND INSTITUTIONAL CONSIDERATION

The First National Bank of Chicago analyzed the data developed in the study, which addresses the financial and institutional factors of the Calumet Skyway and the feasibility questions raised by House Resolution 1180. The analysis considered the following alternatives for the future of the Skyway:

- Remaining an autonomous toll system with the current or a revised rate structure;
- Becoming a freeway; and
- Being incorporated into the Illinois Tollway system.

Historical Perspective

In 1954 the City of Chicago authorized the issuance of \$88.0 million in revenue bonds to finance the construction of the 7.8 mile Calumet Skyway Toll Bridge. An additional \$13.0 million in revenue bonds were issued in 1957 to complete the project. The combined \$101.0 million in term bonds with interest rate coupons of 3.4 percent to 4.4 percent mature in 1995.

The Skyway has been in financial default since 1963. It is currently \$47.9 million in arrears in scheduled sinking fund payments and \$11.5 million in interest payments including penalties. The January 1, 1982, coupon paid in December 1984, is the last to have been paid.

In part, due to the construction of a competing traffic

artery (Interstate 94) the traffic on the Skyway never approached the projections of the consulting engineer. Since revenues did not satisfy interest payments, deposits were not available to fund major maintenance. As a result the Skyway has deferred substantial bridge and pavement rehabilitation. With the continued deterioration of the bridge, the availability of alternative routes, and the increase in toll rates (currently \$1), usage has decreased, further limiting the Skyway's ability to generate revenues.

Debt Service

Future debt service requirements are shown in Table 10. Requirements call for annual interest payments of over \$3.5 million on the \$101.0 million in outstanding debt. Annual Sinking Fund payments pursuant to the Skyway Revenue Bond Ordinance continue at almost \$3.7 million in 1985 and escalate to almost \$15.1 million in 1994.

Past due Sinking Fund payments for principal represent another substantial element of the Calumet Skyway's existing debt service requirements. The Skyway is currently \$47.9 million in arrears on its Sinking Fund payments, and past due interest (and penalties) is \$11.5 million.

Major Maintenance Expense

As shown earlier in this report, the Skyway currently needs \$43.0 million in major maintenance to refurbish the bridge. Approximately \$2.5 million in major maintenance would be needed annually thereafter to maintain the structure according to the standards in effect at the time of its original construction,

Table 10
CALUMET SKYWAY DEBT SERVICE REQUIREMENTS
1985-1995

ITEM	YEAR										
	1985	1986	1987	1988	(thousands)						
					1989	1990	1991	1992	1993	1994	1995
Regular Interest	\$ 1,769	\$ 3,539	\$ 3,539	\$ 3,539	\$ 3,539	\$ 3,439	\$ 3,539	\$ 3,539	\$ 3,539	\$ 3,539	\$ 3,539
Regular Sinking Fund Requirements	<u>3,693</u>	<u>4,175</u>	<u>4,343</u>	<u>4,495</u>	<u>4,653</u>	<u>4,816</u>	<u>4,985</u>	<u>5,160</u>	<u>5,340</u>	<u>15,090</u>	--
Subtotal -	\$ 5,462	\$ 7,714	\$ 7,882	\$ 8,034	\$ 8,192	\$ 8,355	\$ 8,524	\$ 8,699	\$ 8,879	\$18,629	\$ 3,539
Past Due Interest	\$10,179	--	--	--	--	--	--	--	--	--	--
Penalties	1,322	--	--	--	--	--	--	--	--	--	--
Past Due Sinking Fund Requirements (1)	<u>4,794</u>	<u>4,794</u>	<u>4,794</u>	<u>4,794</u>	<u>4,794</u>	<u>4,794</u>	<u>4,794</u>	<u>4,794</u>	<u>4,794</u>	<u>4,794</u>	--
Subtotal - (1)	<u>\$16,295</u>	<u>\$ 4,794</u>	<u>\$ 4,794</u>	<u>\$ 4,794</u>	<u>\$ 4,794</u>	<u>\$ 4,794</u>	<u>\$ 4,794</u>	<u>\$ 4,794</u>	<u>\$ 4,794</u>	<u>\$ 4,794</u>	--
TOTAL DEBT SERVICE	\$21,757	\$12,508	\$12,676	\$12,828	\$12,986	\$13,149	\$13,318	\$13,493	\$13,673	\$23,423	\$ 3,539

(1) Assumes past due interest is paid immediately and past due service costs are amortized over 10 years.
SOURCE: First National Bank of Chicago.

assuming no major or unusual maintenance problems arise. This \$43.0 million is needed over a period not to exceed five years, and therefore, this expenditure has been projected over the first five years of the study period.

Bond Ordinance

All of the bonds for construction of the Skyway were issued pursuant to a City of Chicago Bond Ordinance. This ordinance stipulates that the Bonds are payable solely from revenues derived from operation of the facility. The bonds issued for the Skyway and interest thereon are not an obligation of the City of Chicago or the State of Illinois. The losses resulting from the default on the bonds by ordinance and by bond contract fall solely on the bondholder and not the taxpayers of the State of Illinois or City of Chicago.

According to the contract with the bondholders, the revenues derived from the operation of the Skyway are required to be deposited into the following accounts and in the following priority:

- 1st - To the Operation and Maintenance Account (for routine operation and maintenance expenses)
- 2nd - To the Interest Account (for interest payments on outstanding bonds)
- 3rd - To the Reserve Maintenance Account (for major rehabilitation)
- 4th - To the Debt Service Reserve Account (as a reserve for interest and sinking fund payments)
- 5th - To the Sinking Fund Account (for scheduled bond redemptions)

The flow of funds provided by the Ordinance requires that interest be paid before major maintenance. Therefore, major rehabilitation needed to keep the Skyway facilities in good condition suffers to the extent the Skyway revenues are insufficient to meet interest payments. The Skyway has been forced to defer interest payments since paying the January 1982 coupon (in 1984), hence no deposits have been made to fund major maintenance.

The following items consolidate the statistical data developed for this study and relate to the accounts as established by the Bond Ordinance.

Past Due Obligations - Past due interest obligations of the Skyway total \$11.5 million, including \$1.3 million in penalty interest thereon. Penalty interest is equal to 5 percent per annum on the unpaid interest. The last interest payment was made on December 5, 1984, for the January 1, 1982, coupon. Past-due Sinking Fund obligations (deposits to the Debt Service Reserve Account) are \$47.9 million, creating total past due obligations of \$59.4 million. No deposits have ever been made to the Sinking Fund Account.

Revenues and Expenses - Based on the ten-year projections shown earlier in this report, the Skyway will show positive operating net revenue. Net revenues represent gross revenues less operation and maintenance expenses. Gross revenues under the existing rate structure, range from \$10.9 million in 1985 to \$13.2 million in 1995.⁽¹⁾ Gross revenue projections for the maximum recommended rate range from \$12.0 million to \$15.9 million. Operating expenses are expected to grow from \$3.5 million in 1985 to \$7.3 million in 1995. The projected net revenues will, therefore range from \$7.4 million to \$6.0 million, respectively, under the existing rate structure and \$8.4 million to \$8.6 million

(1) Net revenue equals gross revenue minus maintenance operational and administrative expenses.

under the maximum toll rate.

Summary of Options

To summarize the financial information, several points and comparisons should be considered. The Skyway currently owes \$10.2 million in past-due interest payments. Combined with \$1.3 million in accumulated penalties, the total rises to \$11.5 million. The Calumet Skyway has not made \$47.9 million in bond Sinking Fund payments which are due pursuant to the Bond Ordinance, as amended. In addition, engineering examinations conclude that, at this time, \$43.0 million in rehabilitation needs to be funded to bring the bridge back to a reasonable condition. Under the terms of the Bond Ordinance, no bond Sinking Fund payments can be made until after major rehabilitation requirements have been funded. This, of course, allows most of the revenue of the Skyway to be applied to the more immediate public concern of assuring that the Skyway remains a viable part of the metropolitan area transportation network. In total, the Skyway needs at least \$102.4 million to bring the system current on debt service and bridge rehabilitation requirements. Table 11 shows revenue available for rehabilitation after payment of interest, with the current toll rate, and Table 12 shows these figures for the maximum toll rate.

The first alternative considers the Skyway as an autonomous toll facility with the existing or revised toll rate schedule in effect. With current toll rates, the Skyway will make \$7.4 million in interest payments in 1985. However, not until 1987 will project net revenues be sufficient to service interest and begin funding rehabilitation costs. Thereafter, major rehabilitation funds become available in annual average amounts of approximately \$3.0 million to 1995.

Table 11
ESTIMATED FLOW OF FUNDS TO MAJOR MAINTENANCE
(EXISTING RATE STRUCTURE)
1985-1995

ITEM	YEAR										
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
					(thousands)						
Net Revenues (1)	\$ 7,370	\$ 7,411	\$ 7,997	\$ 7,424	\$ 7,234	\$ 7,028	\$ 6,788	\$ 6,384	\$6,949	\$ 5,427	\$ 4,867
Past Due Interest	11,501	6,195	2,439	--	--	--	--	--	--	--	--
Revenue Available for Current Interest	(4,131)	1,216	5,558	7,424	7,234	7,028	6,788	6,384	6,949	5,427	4,867
Current Interest	1,769	3,539	3,539	3,539	3,539	3,539	3,539	3,539	3,539	3,539	3,539
Revenue Available for Major Maintenance	(5,900)	(2,323)	2,019	3,885	3,695	3,489	3,249	2,845	3,410	1,888	1,328
Major Maintenance Requirement	8,900	8,900	8,900	8,900	8,900	2,500	2,500	2,500	2,500	2,500	2,500
Annual Major Maintenance Funding											
Surplus (Deficit)	(8,900)	(8,900)	(6,881)	(5,015)	(5,205)	989	749	345	910	(612)	(1,172)
Accumulated Major Maintenance Funding											
Surplus (Deficit)	(8,900)	(17,800)	(24,681)	(29,696)	(34,901)	(33,912)	(33,163)	(32,818)	(31,908)	(32,520)	(33,692)

(1) Net revenue equals gross revenue minus maintenance, operational and administrative costs.

Table 12

ESTIMATED FLOW OF FUNDS TO MAJOR MAINTENANCE

(MAXIMUM RATE STRUCTURE)

1985-1995

ITEM	YEAR										
	1985	1986	1987	1988	1989 (thousands)	1990	1991	1992	1993	1994	1995
Net Revenues	\$ 8,476	\$ 9,696	\$ 9,740	\$ 9,833	\$ 9,710	\$ 9,555	\$ 9,365	\$ 8,985	\$ 9,579	\$ 8,083	\$ 7,550
Past Due Interest	11,501	5,034	--	--	--	--	--	--	--	--	--
Revenue Available for Current Interest	(3,025)	4,662	9,740	9,833	9,710	9,555	9,365	8,985	9,579	8,083	7,550
Current Interest	1,769	3,539	3,539	3,539	3,539	3,539	3,539	3,539	3,539	3,539	3,539
Revenue Available for Major Maintenance	(4,794)	1,123	6,201	6,294	6,171	6,016	5,826	5,446	6,040	4,544	4,011
Major Maintenance Requirements	8,900	8,900	8,900	8,900	8,900	2,500	2,500	2,500	2,500	2,500	2,500
Annual Major Maintenance Funding Surplus (Deficit)	(8,900)	(7,777)	(2,699)	(2,606)	(2,729)	3,516	3,326	2,946	3,540	2,044	1,511
Accumulated Major Maintenance Funding Surplus (Deficit)	(8,900)	(16,677)	(19,376)	(21,982)	(24,711)	(21,195)	(17,869)	(14,923)	(11,383)	(9,339)	(7,828)

(1) Net revenue equals gross revenue minus maintenance operational and administrative costs.

Additionally, the Skyway as a stand-alone facility with a maximum toll rate was examined. With this increased rate structure, the ability of the Skyway to fund rehabilitation increases substantially. While not providing an immediate cure for accrued major rehabilitation projects, it appears that within the five-year period, 46 percent of the backlog can also be addressed and additional funds become available in succeeding years. However, the maintenance of the Skyway will continue to fall short of required rehabilitation.

The second alternative considers purchasing the Calumet Skyway for the purpose of operating it as a toll-free facility. The Skyway currently has \$101.0 million in bonds outstanding. Purchasing these bonds under the terms of the 1957 Skyway Bond Ordinance would require a price equal to 101.5 percent of par value: \$102.5 million. Past-due interest, including penalties, on the outstanding debt is \$11.5 million. The Skyway needs an estimated \$43.0 million in arrears in over-due rehabilitative work and removing the toll plazas increases the cost by \$2.0 million. Therefore, the amount necessary to free the Skyway from its bondholder's indebtedness and begin operating the facility as a freeway would total approximately \$160 million. This figure does not include costs of continued operation and maintenance expenses nor provisions for future major maintenance. This figure also does not reflect any reduction in this indebtedness due to negotiations with bondholders.

The final alternative studied was the merger of the Chicago Skyway and the Illinois State Toll Highway Authority (ISTHA). This would require the ISTHA to fund the past due debt service and rehabilitative needs of the Skyway. Existing past due expenses are \$59.4 million for debt service and \$43.0 million from rehabilitation, and the continued debt service equals \$88.0 million.

In addition to this immediate need for \$104.4 million and future debt service of \$88.5 million, the ISTHA would also be burdened with the ongoing operation and obligation for maintenance expenses as well as major maintenance costs. These costs are projected to exceed \$85 million over the next ten years.

Conclusion

The concern outlined in House Resolution 1180 addressed the need to assure the continued safe use of the Skyway as an important part of the highway system in the State of Illinois. Each of the aforementioned alternatives would satisfy that concern, however, there are financial and institutional issues which render the first alternative more viable.

While the Skyway will continue to fall short of revenues available for major maintenance, projections indicate that it will satisfy operation and maintenance expenses and gradually become current on its interest payments. Eventually the Skyway would begin funding some of its major maintenance expenses. If the Skyway adopted a maximum toll rate, then this action would accelerate rehabilitation.

Under the two other alternatives, more massive capital requirements would be necessary because the existing bonds would have to be paid. The satisfaction of the debt requires an additional \$101.0 million, and does not further enhance the ability of the Skyway to remain a safe part of the Illinois transportation network. The net effect would be to use taxpayer or ISTHA public funds to mitigate the risk the Skyway bondholders assumed when they invested in the Skyway. This transfer of public funds would not further serve the transportation needs of the State of Illinois nor provide other general public purpose. Additionally, the

Skyway would continue to be a drain on these resources.

This additional debt burden would likely have a negative effect on the ISTHA's bond rating which would add further cost to the incorporation. This may affect the ability of the ISTHA to effectively finance its continued needs as well as maintain a safe system for its patrons. The incorporation of state and city agencies may also raise management concerns with members of the investment community and affect Illinois' general ability to access the financial market for future funding.

APPENDIX

APPENDIX

A. Viaducts and Ramps

106th Street Viaduct (Indiana State Line to Ewing Avenue)

WSA Inspection

The paint condition was fair to poor with moderate to heavy rust on bearings and bents under open roadway joints.

DLC Inspection

Heavy rust was noted on several steel bents. Open joints with loose or missing joint material were checked.

100th Street Viaduct (Ewing Avenue to Avenue N)

WSA Inspection

The paint condition was fair to poor with moderate to heavy rust on bearings and bents under open roadway joints.

DLC Inspection

Paint condition was poor. Floor beam and stringer deterioration was noted.

Calumet River Viaduct (Avenue N to 96th Street)

WSA Inspection

The inspection team could not get close enough to make any definitive judgments on the condition of this structure. Some rust was noted under deck joints. Overall this structure appeared to be in good condition.

DLC Inspection

Severe rusting was noted in web section of several stringers. Rust was noted on structural steel under open roadway joints.

Stony Island Eastbound Entrance Ramp & Westbound Exit Ramp

WSA Inspection

This structure is in good condition. No readily apparent wear is evident in the paint system. Heavy salt and water stains were present on piers.

DLC Inspection

There are several heavily rusted end diaphragms requiring replacement. There was also heavy rust on various cap beams and closure plates.

79th Street Viaduct (79th Street to Dante Avenue)

WSA Inspection

The paint system was in good condition with the exception of joint locations where there was light rust and paint peeling. Joint filler material has been dislodged and is hanging from the underside of various joints. Several of the truss braces between bents were damaged. Much of the form work from previous deck repairs was still in place. The concrete at the east abutment is spalled and there are moderate salt and water stains. The easterly pier at Dante Street is also stained.

DLC Inspection

The paint condition was good. Rust was noted on stringers and steel bents under open roadway joints.

Several longitudinal struts and cross braces have been damaged.

75th Street Viaduct (Dante Avenue to 75th Street)

WSA Inspection

This structure appears to be in good condition with the exception of some peeling paint.

DLC Inspection

This structure was in good condition.

Marquette Road Viaduct (Marquette Road to Indiana Avenue)

WSA Inspection

There is moderate to heavy rust on the stringers and steel bents. There is heavy rust on the bents and bearings under deck joints. The cantilever joints and hangers are heavily rusted. The paint is in poor condition. Both abutments are stained from salt and water. The south end of the west abutment is spalled and reinforcement is exposed.

DLC Inspection

The paint condition was poor with locally heavy rust under deck joints.

Michigan Avenue Entrance Ramp and Indiana Avenue Exit Ramp

WSA Inspection

There is moderate rusting of the bents and stringers at deck joints. The paint is in fair condition. The east abutment is spalled and reinforcement is exposed.

The concrete pier at 69th Street for the Michigan Avenue Ramp had a deep spall with exposed reinforcement bars.

DLC Inspection

The concrete piers have extensive areas of cracked and spalled concrete with exposed reinforcement bars. The ramp steel was painted east of bent 24CD. The rest required painting.

B. Street Overpasses

The WSA inspection of these structures is reported on a structure basis. In contrast, the DLC report makes a general statement as to their condition and notes the exceptions. Following is a condensation of their comments on these structures:

The structures were generally in good condition. Bridge abutments are subject to concrete deterioration and spalling due to roadway drainage overflowing through deck joints. Rusting of the steel and bearings under the open joints is of concern. Normal paint deterioration due to aging and weather has been accelerated by roadway drainage overflow.

The exceptions to the above will be noted following the WSA evaluation for the particular structure.

Exchange Avenue Overpass

WSA Inspection

This structure is generally in fair condition. Paint is peeling along the bottom of all stringers. There are salt and water stains on both abutments.

92nd Street Overpass

WSA Inspection

There is light rusting and peeling of paint throughout this structure. Additional support (timber) has been placed in front of the bearings at the west abutment.

DLC Inspection

The Westbound roadway north abutment backwall requires reconstruction. The superstructure has been temporarily shored on the west abutment. Several bearings have improperly grouted anchor bolts on the east abutment. The abutment backwall expansion joint material was badly deteriorated or missing.

Marquette Avenue Overpass

WSA Inspection

This structure had light rusting and paint peeling throughout. Moderate rust was noted on end diaphragms. The abutments have salt and water stains.

Colfax Avenue Overpass

WSA Inspection

This structure has light rusting and paint peeling throughout. Heavy rust was noted on the stringers adjacent to the longitudinal median joint. The beams were supported on wood blocks. Both abutments have moderate salt and water stains.

DLC Inspection

The superstructure has been shored on the east abutment bridge seat. The east abutment and top of the backwall were badly cracked. The abutment wall expansion material was deteriorated or missing.

Kingston Avenue Overpass

WSA Inspection

Light rusting and paint peeling, with moderate rust at the end diaphragms was noted. Floor drain downspouts were cracked and leaking. Several large cracks were noted in both abutments. The abutments are stained due to salt and water drainage.

DLC Inspection

Several cracks in the abutment walls were rust stained and spalled.

87th Street Overpass

WSA Inspection

The north structure has several large spalls with exposed reinforcement bars in the east abutment. Large cracks were noted in both abutments. Heavy rust was noted on the end diaphragms over the west abutment. On the south structure, the northeasterly-most masonry plate has concrete missing beneath it. Moderate rusting and paint peeling was noted throughout this structure.

Both structures exhibited heavy salt and water stains on both abutments.

DLC Inspection

Both east abutment backwalls require reconstruction. There are vertical cracks in the abutment walls with exposed reinforcement bars.

86th Street Overpass

WSA Inspection

This structure has light rusting and paint peeling throughout. Moderate rust was noted on end diaphragms. Moderate salt and water stains were observed on both abutments.

85th Street Overpass

WSA Inspection

Light rusting and paint peeling was noted. There is a large spall with exposed reinforcement in the east abutment. There is leakage through the deck causing moderate to heavy salt and water stains on both abutments.

DLC Inspection

Some spalled concrete on both abutment backwalls.

Jeffery Boulevard Overpass

WSA Inspection

This structure has light rusting and paint peeling throughout. Moderate rust was noted on end diaphragms.

Moderate salt and water stains were observed on both abutments.

83rd Street Overpass

WSA Inspection

Light rusting and paint peeling was noted throughout this structure. The end diaphragms exhibited moderate rusting. There was light to moderate salt and water stains on both abutments. It should be noted that there is not a cross street under this structure.

DLC Inspection

Large concrete spalls with rusty reinforcement bars and rust stained vertical cracks were noted on both abutments.

Elliot Avenue Overpass

WSA Inspection

This structure exhibited light rust and paint breakdown. There is a medium size concrete spall on the west abutment backwall. Heavy rust was noted on the bearings and end diaphragms at the east abutment.

East End Overpass

WSA Inspection

This structure was in above average condition.

DLC Inspection

The eastbound roadway west abutment backwall and expansion joint requires repairs.

Stony Island Avenue Overpass

WSA Inspection

The paint system was in poor condition with moderate rust throughout. Heavy rust was present on the end diaphragms at both abutments.

73rd Street Overpass

WSA Inspection

This structure has light rusting and paint peeling throughout. There is rust on the end diaphragms. Moderate salt and water stains were observed on both abutments.

Cottage Grove Overpass

WSA Inspection

Moderate rusting and paint system breakdown is evident on this structure. There is heavy rust on the bearings at the east abutment. Moderate salt and water stains on both abutments.

71st Street Overpass

WSA Inspection

There is moderate rust throughout this structure. Heavy rust was apparent on the bearings at the east abutment. The paint system is in poor condition. There is a large crack in the east abutment at the construction joint. Both abutments have heavy salt and water stains.

DLC Inspection

The east abutment expansion joint requires repair. The west abutment wall has large areas of spalled concrete with rusted reinforcement bars. There are also several rust-stained vertical cracks.

St. Lawrence Avenue Overpass

WSA Inspection

Light rust and paint system breakdown is evident on this structure. The bearings at the west abutment are heavily rusted. Both abutments have several large cracks as well as salt and water stains.

Keefe Avenue Overpass

WSA Inspection

This structure has moderate rusting and paint peeling throughout. There is moderate salt and water stains on both abutments. There is also some spalling on the southeast retaining wall.

DLC Inspection

The south abutment wall has a large area of spalled concrete with rusted reinforcement bars and several heavily rust-stained vertical cracks.

Martin Luther King Drive Overpass

WSA Inspection

Moderate rust is evident throughout this structure. The bearings at the west abutment are heavily rusted. The paint system is in fair condition. There are heavy

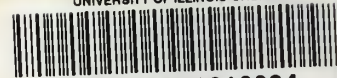
salt and water stains on the west abutment and moderate stains on the east abutment.

State Street Overpass

WSA Inspection

There is heavy rust on the stringers and on the steel bents. There are numerous spalls on the west abutment. The paint is in poor condition. Heavy salt and water stains are in evidence on the west abutment.

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